

IN THE CLAIMS:

Claims 1-33 (Cancelled)

34. (New) A fiber-reinforced, flexible matrix, wherein said matrix comprises:

about 10% to about 75% by weight of waste scrap carpeting, wherein said carpeting has a first polymer backing and carpet fibers from a polymer having a melting point higher than the melting point of polyvinyl chloride and where said waste scrap carpeting comprises about 50% to about 80% by weight of non-melting filler materials including inorganic fillers based on the weight of said backing; and

about 25% to about 90% by weight of a flexible second polymer, wherein said matrix is a substantially continuous phase of said first and second polymers having said carpet fibers and inorganic fillers dispersed therein.

35. (New) The matrix of claim 34, further comprising a polyvinyl chloride plasticizer.

36. (New) The matrix of claim 34, further comprising a polyethylene copolymer.

37. (New) The matrix of claim 34, wherein said matrix is a substantially homogenous mixture of polyvinyl chloride and discrete carpet fibers having a length of about 1/8 to about 2 inches.

38. (New) The matrix of claim 34, wherein said polymeric fibers are selected from the group consisting of polyamide fibers, polyester fibers and mixtures thereof.

39. (New) The matrix of claim 34, wherein said matrix comprises about 45% to about 85% by weight polyvinyl chloride.

40. (New) The matrix of claim 34, wherein said flexible second polymer is flexible polyvinyl chloride is virgin polyvinyl chloride having a Shore A hardness of about 40 to about 100.

41. (New) The matrix of claim 34, wherein said carpet scrap is selected from the group consisting of carpet scrap, post consumer carpet scrap, post industrial scrap, and mixtures thereof.

42. (New) The matrix of claim 35, wherein said plasticizer is dioctyl phthalate.

43. (New) The matrix of claim 34, wherein said matrix comprises about 5-20% by weight carpet fibers.

44. (New) The matrix of claim 34, wherein said matrix comprises about 10-55% by weight polyvinyl chloride from said carpet.

45. (New) The matrix of claim 34, wherein said carpet comprises about 15% fiber, about 45% polyvinyl chloride backing and about 40% inert material wherein the percentages are based on the weight of the matrix.

46. (New) The matrix of claim 34, wherein said first polymer is polyvinyl chloride.

47. (New) A fiber-reinforced, flexible matrix, wherein said matrix comprises:

about 10% to about 75% by weight of waste scrap carpeting, wherein said carpeting comprises a backing and carpet fibers from a polymer having a melting point higher than the melting point of polyvinyl chloride, said backing comprising about 30% to about 50% of a first polymer and about 50% to about 80% inorganic fillers and latex materials based on the weight of the backing; and

about 25% to about 90% by weight of a flexible polyvinyl chloride, wherein said matrix is a substantially continuous phase of polyvinyl chloride and said first polymer having said carpet fibers, inorganic fillers and latex materials dispersed therein.

48. (New) The matrix of claim 47, wherein said matrix contains about 5% to about 20% of said carpet fibers, about 10% to about 40% of said filler materials and the remainder polyvinyl chloride based on the total weight of said matrix.

49. (New) A process of forming a fiber reinforced, flexible molded article comprising the steps of:

supplying a feed mixture to the inlet of an extruder, said feed mixture comprising about 25% to about 90% flexible polyvinyl chloride and about 10% to about 75% carpet scrap based on the total weight of said feed mixture, said carpet scrap having a fiber component and a backing material where said backing material includes about 30% to about 50% by weight of a first polymer component;

heating said feed mixture in said extruder to a temperature sufficient to melt said first polymer component of said carpet scrap and of said flexible polyvinyl chloride substantially without melting said fiber component and substantially without reducing the fiber length to

form a substantially uniform and continuous mixture of said first polymer component and said melted polyvinyl chloride and an unmelted fiber component; and

discharging said substantially uniform mixture from said extruder and shaping and cooling said mixture to form a molded flexible article of a matrix of a substantially continuous phase of said first polymer component and said polyvinyl chloride having said unmelted fiber component dispersed therein.

50. (New) The process of claim 49, wherein said molded flexible article comprises about 5% to about 20% by weight of said fiber component, and about 45% to about 85% by weight of said first polymer component and polyvinyl chloride.

51. (New) The process of claim 49, wherein said molded flexible article comprises about 10% to about 55% by weight polyvinyl chloride supplied from said carpet scrap.

52. (New) The process of claim 49, wherein said uniform mixture of melted polyvinyl chloride and unmelted fiber component has a melt flow index of less than about 5.

53. (New) The process of claim 49, wherein said fiber component comprises polyamide fibers, polyester fibers, and mixtures thereof.

54. (New) The process of claim 49, further comprising comminuting said carpet scrap into pieces of up to about 2 inches in length prior to feeding to said extruder.

55. (New) The process of claim 49, comprising heating said feed mixture to about 140° to about 190°C to melt said polyvinyl chloride substantially without melting said fiber component.

56. (New) The process of claim 49, wherein said flexible polyvinyl chloride has a Shore A hardness of about 40 to about 100.

57. (New) The process of claim 49, wherein said matrix comprises about 10% to about 40% by weight of unmelted filler materials from said carpet.

58. (New) The process of claim 49, wherein said carpet scrap contains about 50% to 80% by weight inorganic fillers and latex materials based on the weight of the backing, and where said inorganic fillers and latex materials are dispersed in said continuous phase.